REMARKS

The Office Action of May 6, 2005 has been received and its contents carefully considered.

Claims 1, 2 and 4 to 14 are all the claims pending in the application, prior to the present amendment.

With respect to claim 14, the Examiner states that it requires the presence of an amorphous initial growth portion of the intermediate film of less than or equal to 1, but that claim 9 does not require such a presence and encompasses an intermediate film having no initial amorphous growth portion. Thus, the Examiner is interpreting claim 9 as meaning that the initial amorphous growth portion can have a thickness that is equal to 0 nm. In response, applicants have amended claim 9 in the same manner as claim 14 to more positively require in claim 9 the presence of an amorphous initial growth portion of the intermediate film of less than or equal to 1.

Claims 1 and 6 to 14 have been rejected under 35 U.S.C. § 102(b) as anticipated by the newly cited patent to Futamoto et al.

In addition, claims 2, 4 and 5 have been rejected under 35 U.S.C. § 103(a) as obvious over Futamoto et al.

Applicants submit that Futamoto et al do not disclose or suggest the presently claimed invention and, accordingly, request withdrawal of this rejection.

Of the above claims, claims 1, 13 and 14 are independent. Applicants discuss the independent claims below.

With respect to independent claim 13, it requires that a Co, Cr-containing intermediate film be in contact with a Co-containing orientation control film. Further, applicants have amended claim 14 to state that the Co, Cr-containing intermediate film is in direct contact with the Co-containing orientation control film. Futamoto et al do not disclose or suggest the structure and composition of claims 13 and 14.

In the Office Action, the Examiner states that Futamoto et al disclose "a second soft magnetic layer formed from a CoW containing alloy corresponding to the claimed 'orientation control' layer", and refers to Table 2 at columns 13 and 14 as disclosing a Co, Cr-containing intermediate film in direct contact with a Co-containing orientation control film. Applicants submit that the Examiner has misinterpreted the meaning of Table 2.

In particular, the compositions and structures in Table 2 appear in Example 3, and are made in accordance with the structure shown in Fig. 6.

In Fig. 6, as described at column 10, lines 46 to 65, which corresponds to Sample 1 of Table 2 at columns 11 and 12, the magnetic recording medium is comprised of a substrate 61, and, in order, a Cr non-magnetic layer 62, a CoCrPtTa ferromagnetic layer 63, a CoNbZr first soft magnetic layer 64, a SiB non-magnetic layer 65, a FeSiAl second soft magnetic layer 66, a Si non-magnetic layer 67, a CoCrRu non-magnetic layer 68, a CoCrPtTa perpendicular magnetic layer 69, a CoCrPt perpendicular magnetic layer 70, and a carbon protective layer 71. Thus, in

Sample 1, there are two soft magnetic layers 64 and 66 and two perpendicular magnetic layers 69 and 70. Table 2 gives the compositions of these four layers, but does not show the other layers 61, 62, 63, 67, 68 and 71 that are in the magnetic recording medium.

As can be seen from Fig. 6, the second soft magnetic layer 66 is in direct contact with the Si non-magnetic layer 67 which is in direct contact with the nonmagnetic layer 68 composed of CoCrRu. This CoCrRu layer 68 in turn is in contact with the first perpendicular magnetic layer 69. Thus, Table 2 does not show a direct contact between the second soft magnetic layer 66 and the CoCrRu layer 68 since these layers are separated from each other by the Si non-magnetic layer 67 and, therefore, does not show a Co,Cr intermediate film 68 in direct contact with a Co-containing orientation control film.

Example 3, at column 11, lines 4 to 13, describes further samples in which the composition of the second soft magnetic layer 66 is varied. Among these samples, there are two samples where the soft magnetic film 66 contains Co and W.

These samples are shown in Table 2 as Samples 11 and 15 at columns 13 and 14. It is these Samples 11 and 15 which applicants believe that the Examiner has referred to in the Office Action as containing "a second soft magnetic layer formed from a CoW containing alloy corresponding to the claimed 'orientation control' layer".

As can be seen from the above discussion, however, these CoW containing layers 66 are not in direct with the CoCrRu layer 68, but are separated therefrom by the Si non magnetic layer 67.

The Examiner also refers to Fig. 1 of Futamoto et al in support of her position. Fig. 1 is broadly described at columns 3 and 4 of Futamoto et al. However, no compositions are disclosed at columns 3 and 4. Fig. 1 of Futamoto et al is exemplified in Example 1 of Futamoto et al. None of the various samples of Example 1 of Futamoto et al describe a Co,Cr containing intermediate layer, and none of the samples show a Co containing orientation layer in direct contact a Co,Cr containing intermediate layer.

In view of the above, applicants submit that Futamoto et al do not disclose or suggest a CoCr containing intermediate film in direct contact with a Co containing orientational control film as set forth in claims 13 and 14.

Turning now to claim 1, applicants have amended it to incorporate the recitations of claim 2, which has been canceled. Thus, claim 1 requires that the orientation control film is made of a Co alloy which contains W, and the Co content of the orientation control film is at least 20 at% and equal to or less than 85 at%.

The only Co-W alloys that are disclosed in Futamoto et al appear in Table 2, Sample Nos. 11 and 15 where there is disclosed a Co-4 at% W-3 at% Zr film and a Co-3.2 at% W-3 at% Hf. These alloys do not disclose or suggest the alloys of the orientation control film of claim 1 which have more than six times the amount of W disclosed in Futamoto et al.

In view of the above, applicants submit that claims 1 and 4 to 14 are patentable over Futamoto et al and, accordingly, request withdrawal of these rejections.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,

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